

ABSTRACT

An apparatus for delivering a stent into a blood vessel includes a sheath having a rounded bullet-shaped distal portion including a plurality of flexible leaflets integrally molded thereto. The stent is disposed in its contracted condition within a lumen of the sheath proximate the distal portion. A bumper is slidably disposed within the lumen that includes a helical compression coil, a bumper element attached to the helical coil including a blunt distal edge for abutting the stent, and an extension element extending distally from the bumper element through the stent and between the leaflets to facilitate introducing the apparatus over a guidewire. The sheath is formed by inserting a bullet into a blunt-ended tube, and inserting the tube into a bullet-shaped bore in a heated die until the tube material is softened and deforms into a rounded bullet shape. Slits are then cut into the distal portion to create the leaflets.